

REMARKS

Further and favorable reconsideration is respectfully requested in view of the forgoing amendments and following remarks.

Thus, claim 1 has been amended in response to the objection to this claim, as a result of which the objection has been rendered moot.

In addition, claim 1 has been amended to recite the method by which the biaxially oriented film is biaxially oriented, based on the disclosure in the first full paragraph on page 13 of the specification.

Claim 2 has been amended to recite the major component of the biodegradable resin, based on the disclosure in the paragraph bridging pages 16 and 17 of the specification.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attachment is captioned "**Version with markings to show changes made.**"

The patentability of the present invention over the disclosures of the references relied upon by the Examiner in rejecting the claims will be apparent upon consideration of the following remarks.

Thus, the rejection of claims 1 and 3 under 35 U.S.C. § 102(a) as being anticipated by El-Afandi et al. is respectfully traversed.

The Examiner takes the position that El-Afandi et al. discloses a biaxially oriented film of an aliphatic polyester (column 16, lines 6-14) having a crystallizing melting heat of at least 30 J/g and less than 100 J/g (column 17, lines 42-44).

But column 16, lines 6-9 of the reference states that:

A preferred fourth composition which can be used for preparing the blocking reducing layer includes a lactic acid residue containing polymer and a semicrystalline polymeric additive.

That is, a mixture of a lactic acid residue containing polymer and a semicrystalline polymeric additive is described. The use of a semicrystalline polymeric additive alone is not disclosed.

Thus, according to the reference, it is preferable to use a mixture resin of them.

In contrast, the present invention is directed to a laminate of a layer comprising a polylactic acid-family polymer and a layer comprising an aliphatic polyester having the structure of the formula

(1). The former layer does not correspond to the mixture resin described in the El-Afandi et al. reference. Further, the layer comprising an aliphatic polyester having the structure of the formula (1) of the present invention does not include the lactic acid residue containing polymer of the reference, as apparent from formula (1).

Thus, the reference does not disclose a laminate of a layer comprising a polylactic acid-family polymer and a layer comprising an aliphatic polyester having the structure of the formula (1), and accordingly, Applicants take the position that claims 1 and 3 are not anticipated by El-Afandi et al.

In addition to the differences discussed above, Applicants note that the disclosure in column 8, lines 15-18 of El-Afandi et al. refers to "coextrusion", more specifically, "coextrusion blow molding". In contrast, in amended claim 1, the resin film of which the major component is a polylactic acid-family polymer is oriented by a successive orienting method in which longitudinal orientation is carried out by a roll method and lateral orientation is carried out by a tenter method, or by a simultaneous biaxially orienting method in which longitudinal and lateral orientations are simultaneously carried out by use of a tenter, which is not orientation by blow molding. Orienting films formed by blow molding and oriented film formed according to the present invention have different characteristics from each other in various aspects such as manufacturing efficiency, evenness of the thickness of the film obtained, and uniform orientation of the film obtained.

For this additional reason, the biaxially oriented film of the present invention, of which the major component is a polylactic acid-family polymer, is patentable over the El-Afandi et al. reference.

The rejection of claims 2 and 4 under 35 U.S.C. § 103(a) as being unpatentable over El-Afandi et al. in view of Mennella is respectfully traversed.

The comments set forth above concerning the El-Afandi et al reference are considered to be equally applicable to this rejection.

As indicated above, claim 2 has been amended to recite that the biodegradable resin, forming the zipper, contains as the major component a polylactic acid-family polymer, an aliphatic polyester having the structure of the formula (1) in claim 1, or a mixture thereof.

The Mennella reference discloses a zipper comprising a biodegradable resin, but fails to disclose or suggest a specific type of biodegradable resin. On the other hand, the specific type of

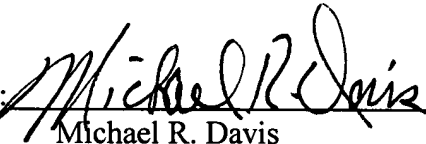
biodegradable resin in amended claim 2 exhibits desirable physical properties such as strength, which are suitable for manufacturing a zipper.

For these reasons, Applicants take the position that the subject matter of claim 2 is patentable over a combination of El-Afandi et al. with Mennella.

Therefore, in view of the forgoing amendments and remarks, it is submitted that each of the grounds of objection and rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

Shigenori TERADA et al.

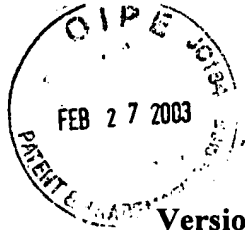
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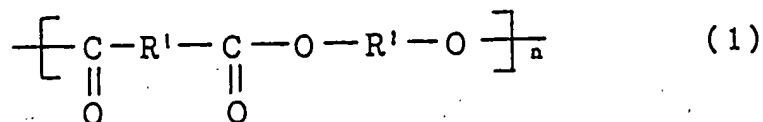
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Version with Markings to Show Changes Made

1. (Amended) A biodegradable bag comprising a laminate of a biaxially oriented film of which the major component is a polylactic acid-family polymer, and a film of which the major component is an aliphatic polyester having the structure of the formula (1) and having a crystallizing melting heat ΔH_m (J/g) of $45 \leq \Delta H_m \leq 55$, wherein said biaxially oriented film is biaxially oriented by a successive orienting method in which longitudinal orientation is carried out by a roll method and lateral orientation is carried out by a tenter method, or by a simultaneous biaxially orienting method in which longitudinal and lateral orientations are simultaneously carried out by use of a tenter, said bag being made by heat-sealing said laminates so that said biaxially oriented film of which the major component is a polylactic acid-family polymer will be an outer layer, [.]



wherein R^1 and R^2 are alkylene groups or cycloalkylene groups having a carbon number of 2-10, n is the degree of polymerization necessary for the weight-average molecular weight to be 20000 to 300000, [.] n R^1 's and R^2 's may be the same or different, and [. Also] in the formula, instead of the ester-bond residue, urethane-bond residue and/or carbonate-bond residue may be contained by up to 5% of the weight-average molecular weight.

2. (Amended) The biodegradable bag as claimed in claim 1 wherein a zipper made of a biodegradable resin is provided at the mouth portion thereof, and said biodegradable resin contains as the major component a polylactic acid-family polymer, an aliphatic polyester having the structure of the formula (1) in claim 1, or a mixture thereof.